

SOME NOTES ON THE LIFE-HISTORY OF *IALMENUS MYRSILUS*, Dbl.

*The ovum.*—Pale green, or pale blue-green, with well-marked white reticulated covering over the whole surface, giving it the appearance of being frosted when seen without the aid of the lens. The egg is approximately hemispherical, with the basal edge rounded off and the vertex sharply depressed. Average diameter, 0.93 mm. Deposited singly on bark.

*The pupa.*—Uniform dark brown, resembling in shape the pupa of *Hypochrysoptera delicia*, Hew. Length, 11 to 12 mm.; breadth, 4 to 4.5 mm. Attached at posterior end to small web, and supported by a fine belt round the body. The pupæ are usually found under old bark, and in cracks near the base of Blackwood trees (*Acacia melanoxylon*), and occasionally in any sheltered place higher up the tree. I have found them at Camperdown associated with pupæ and larvæ of *Ogyris abrota*, about the roots of Mistletoe (*Loranthus*) growing on Blackwoods.

In cases where the food-plant affords insufficient shelter the larvæ often travel for many yards before spinning up on neighbouring trees. About one-half of the pupæ found at Gordons were on eucalypt trees, under loose bark, usually, but not always, near the ground. One lot of five was taken at about twelve feet from the ground. Although the pupæ are often found in numbers together on the Blackwood trees, they do not seem to be gregarious, as are the pupæ of *I. evagoras*. Their clustering together seems to be an accidental occurrence, due to the scarcity of good shelter on the tree, rather than to any well-defined course of action on the part of the larvæ, and this is borne out by the fact that they are seldom found other than singly on the eucalypts. Even when in clusters of nine or ten, there is no sign of a common network of silk for the support of the chrysalides, as with *I. evagoras*. Each has its own separate little net. Specimens of these pupæ were found in February, and again in September and October.

*The imago.*—The general description of this insect is too well known to need repetition. In some specimens, of both sexes, the upper surfaces of the wings, at and near the base, are lightly dusted with bluish-green scales of the same tint as the little wavy marginal line at the anal angle of the secondaries. The females show some variations in the markings on the under side of the secondaries. The marginal red band, and also the series of black spots extending from near the middle of the costa across the wing, seem very constant, but midway between these in some specimens is a well-marked line of black spots parallel to the red marginal line, beginning near the costa and terminating in a larger spot near the anal angle.

Of seventeen females, three have this characteristic well

marked, in ten others it is reduced to one spot on each wing, while in the remaining four there is one spot on one wing and two on the other. Eleven males out of sixteen have the one spot only near the angle of each wing, another has one on the left and two on the right wing, two have two on each, and two more have two on one and three on the other wing. Otherwise there seems to be little variation.

This butterfly emerges usually in the forenoon, develops in about twenty minutes, and is ready for flight in an hour or so. Of those reared this season the majority emerged during October, the extreme dates being 27th August and 9th November.—W. H. F. HILL.

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NOTES ON THE NESTING OF *CALYPTORHYNCHUS BANKSI* AND *ERYTHRODRYAS ROSEA*.

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I.—*CALYPTORHYNCHUS BANKSI*.

*Psittacus Banksii*, Lath., Ind. Orn., p. 107 (1790).

*Calyptorhynchus Banksi*, Vig. and Horsf., Trans. Linn. Soc., vol. xv., p. 271 (1826); Ramsay, Cat.

*Psittaci*, p. 17 (1891); Salvad., Cat. Bds. Brit. Mus., vol. xx., p. 109 (1891).

THE range of Banks's Black Cockatoo extends from the neighbourhood of Cairns, in north-eastern Queensland, throughout the whole of New South Wales and most parts of Victoria. In North Australia it is represented by a slightly smaller and scarcely separable race, known as *C. macrorhynchus*, and in Central and Western Australia by a closely allied but specifically distinct species called *C. stellatus*. I can testify to the accuracy of Gould's remarks relative to the amount of caution required to approach *C. Banksi*, while at other times, especially when feeding, it can be easily accomplished. Near Ballarat, in Victoria, and in the Illawarra district of New South Wales, I found this species unusually wary, keeping to the tops of the tallest Eucalypti, and seldom coming within shooting range. But when the heavily timber-clad ranges of South Gippsland, in Victoria, were first settled upon by selectors, I have frequently stood under a dead Acacia while several of these birds have been busily engaged in searching the branches for the larvæ of insects, not more than forty feet above my head. Especially was this fact observable during a thick drizzling rain. Probably by this time they have learned to shun the presence of man, if they have not been wholly extirpated or driven away, as many other species have been, since that district was denuded to a large extent of its primeval forest.

When in Melbourne last year I had an opportunity of examining the rare egg of this species in the collection of our